

**United States Environmental Protection Agency
EPA New England
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April 13, 2004

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Public Information Repositories

RE: March 2004 Monthly Report
1.5 Mile Reach Removal Action
GE-Pittsfield/Housatonic River Site

Enclosed please find the March 2004 Monthly Report for the 1.5 Mile Reach Removal Action. In accordance with the Consent Decree for the GE-Pittsfield/Housatonic River Site, the United States Environmental Protection Agency (EPA) is performing the 1.5 Mile Reach Removal Action, with General Electric funding a portion of the project through a cost sharing formula.

The EPA has entered into an agreement with the United States Army Corps of Engineers (USACE) to assist in the design and construction of the Removal Action. The USACE subsequently awarded a design-construct contract to Weston Solutions, Inc. (Weston). Weston, with several subcontractors, will be performing the design and construction activities for the 1.5 Mile Reach Removal Action.

If you have any questions, please contact me at (413) 236-0969.
Sincerely,

Dean Tagliaferro
1.5 Mile Reach Removal Action Project Manager

1. Overview

During March 2004, the Environmental Protection Agency (EPA), the United States Army Corps of Engineers (USACE), the USACE's contractor, Weston Solutions, Inc., and Weston's subcontractors continued remediation activities on the 1.5 Mile Reach Removal Action. The primary work included completing excavation activities in Cells 14 and 15. Riverbed and riverbank backfill activities in Cells 14 and 15 were initiated. The repairs and reinforcement of the crib wall on Parcel I8-10-5 continued. The installation of the cantilevered retaining wall in Cell 15E was completed. In addition, a transfer of non-TSCA materials from the stockpile management areas to approved off-site facilities was performed.

2. Chronological description of tasks performed

Refer to Figure 1 for an orientation of the excavation cells and their respective locations.

By the end of February 2004, the reinforcement activities of the crib wall on Parcel I8-10-5 were in progress. The installation and grouting of the soil nails was completed in the top tier of the crib wall base. During the first week in March the reinforcement activities continued. Framing and wire mesh was installed over the soil nails in the top tier of the crib wall base in order to prepare for the final layer of shotcrete. The soil nails were then tested and a final layer of shotcrete was applied to the top tier of the crib wall base.

Once the shotcrete was installed onto the top tier of the crib wall, the installation of the pre-cast concrete panels into the "C" – Channel, situated on the top of the piles installed in the river channel to support the panels, was performed. The panels were secured to temporary tieback anchors located in the adjacent parking lot until the permanent anchors could be installed. The panels were leveled and squared into place by utilizing steel plates. The spaces created in the "C"- Channel during the leveling efforts were to be grouted the following week.

Also, by the end of February, the excavation activities along the riverbank and in the riverbed were completed in Cells 14E and 15E with the exception of the following two areas: 1) the riverbank soils along the cantilevered sheetpile wall in Cell 15E, and 2) the riverbed sediments along the crib wall pending completion of the crib wall repairs. The remaining excavation along the cantilevered sheetpile wall was scheduled to occur once the sheetpile was cut to match the new design excavation depth. Furthermore, it was necessary to coordinate the excavation along the cantilevered sheetpile wall with local utilities such that a utility pole located in the excavation area could be supported during excavation activities. During the first week of March, the efforts associated with cutting the sheets of the cantilevered sheetpile wall to match the new design excavation depth where the wall was no longer necessary in Cell 15E continued. Plus, excavation of the remaining TSCA and non-TSCA riverbank material in Cell 15E was initiated. Also, during the first week in March, the riverbed and riverbank excavation activities were completed in Cell 15W. The TSCA material was transported to the Building 63 stockpile

management area, and the non-TSCA material previously characterized for off-site disposal was transported to the Area 64D stockpile management area. The non-TSCA material excavated from areas that have not been previously characterized for off-site disposal was transported to Building 65. (See Table 1 for a daily summary of material transported to the stockpile management areas in the month of March and Table 2 for final excavation quantities to date). The excavated riverbanks were covered daily with reinforced poly sheeting to prevent erosion and for dust control.

On March 05, 2004, due to the possible dam overtopping, all of the construction equipment was decontaminated and removed from the river channel. On March 06, 2004 due to high river flows the stop logs were removed to elevation 975 and the river channel downstream of the dam was flooded.

During the second week of March, the dam elevation was raised to 978 and dewatering activities were completed in Cells 14 and 15. The water within Cell 14 and 15 was pumped to the water treatment system.

Reinforcement activities of the crib wall on Parcel I8-10-5 continued. The spaces created in the "C"- Channel during the leveling efforts of the concrete panels were grouted. The installation of the shotcrete/soil nail retaining wall was completed in the lower tier of the base of the crib wall as follows: First, the excavation of riverbank material in the lower tier of the base of the wall was completed exposing the micropiles. Since the exposed, excavated face of lower tier of the crib wall base was more stable than the upper tier it did not require a temporary shotcrete face to ensure the stability of the crib wall base during soil nail installation. Instead, a permanent shotcrete face was installed which consisted of a wire mesh installed along the entire length of the lower tier of the crib wall base, #4 rebar to anchor the mesh, and a 7 to 8-inch layer of fast setting shotcrete to cover the wire mesh. Once the shotcrete was set, the installation and grouting of the soil nails was completed in the lower tier of the crib wall base. The testing of the soil nails in the lower tier was completed with the exception of one soil nail (which will be tested at a later date). The drilling equipment was decontaminated and removed from the riverbed. Drilling equipment was mobilized to the parking lot of Parcel I8-10-5 and drilling and grouting activities for the 32 permanent tieback anchors for the pre-cast concrete panels were initiated.

Concurrent to the installation of the tieback anchors from the parking lot, the excavation of the remaining non-TSCA riverbed sediment along the crib wall was completed and the material was transported to Building 65 stockpile management area. This concluded the excavation activities in Cell 14E. The final excavation verification survey was completed. Filter material was placed adjacent to the shotcrete wall to prevent potential undermining of the wall during high flows.

Also, during the second week of March, the cutting work on the portion of the Cell 15E cantilevered sheetpile wall that was no longer necessary was completed and the remaining TSCA and non-TSCA riverbank material in Cell 15E along the cantilevered wall was excavated. The TSCA material was transported to Building 63 stockpile management area and the non-TSCA material was transported to Building 65. This concluded the excavation activities in Cell 15E and the final excavation verification survey was completed.

Other activities accomplished during the second week of March included general site clean up efforts, removal of the temporary winterization structures from the water treatment system, and installation of bin blocks around the water treatment system pad. Also, damage caused by the flooding of the river on March 06, 2004 to the temporary earthen dam, located approximately 30 feet upstream of the 54-inch pipe outfall, was repaired.

Repairs were made to the 12-inch storm water sewer line which intersected the cantilevered sheetpile wall in Cell 15E. The old pipe was excavated and removed back to the catch basin on High Street and a hole was cut in the sheetpile wall to allow for the installation of a new pipe. The new pipe was attached to the catch basin on High Street, run through the sheetpile wall, and sealed as necessary.

The last task completed during the second week of March was the relocation of the 54-inch pipe to the east side of the riverbed allowing access to the west side of Cells 14 and 15 for excavation purposes.

During the third week of March, the reinforcement activities of the crib wall on Parcel I8-10-5 continued. This included drilling and grouting activities for the 32 permanent tieback anchors for the pre-cast concrete panels.

Also during the third week of March, the TSCA and non-TSCA riverbed and riverbank excavation activities in Cell 14W were initiated. The sediment in the riverbed was excavated down to bedrock. All the excavated TSCA material was transported to the Building 63 stockpile management area, the non-TSCA material previously characterized for off-site disposal was transported to Area 64D stockpile management area, and the non-TSCA material from areas that were not previously characterized for off-site disposal was transported to Building 65. NAPL material was encountered during the Cell 14W riverbed excavation. The NAPL-impacted material extended into the riverbank. Additional riverbank excavation was necessary to remove the NAPL-impacted material. Approximately 50 cy of NAPL-impacted material was excavated and transported to the Building 68 stockpile management area. A 2-inch thick layer of grout was installed at the toe of the riverbank to encapsulate any residual NAPL-impacted material.

Once the Cell 14W riverbed was excavated, the entire river bottom in Cells 14 and 15 was inspected and verification was made that bedrock was reached. The high pressure power washing of bedrock to remove any visible sediment was initiated. All water generated during the power washing was diverted to the water treatment system. All the residual sediment material was collected into roll off boxes located in the riverbed. This material will be mixed with a cement mixture at a later date for stabilization purposes for future transportation. Backfilling activities were initiated in the riverbed in Cells 14 and 15 by placing filter material in the areas of the riverbed where the power washing was completed. Due to the presence of bedrock within the riverbed of Cells 14 and 15 excavation depths varied from the design. Therefore, two different backfill configurations were developed to meet the design requirements. The first backfill configuration involves approximately the first 185 feet of the riverbed, which will be backfilled with a layer of filter material in low lying areas at least, followed by a six-inch layer of structural fill. The structural fill will be covered by geotextile, and then articulated concrete blocks (ACB) will be installed on top of the geotextile. Due to the river channel restrictions posed by the Elm Street Bridge abutments and the newly installed concrete wall and anchored

retaining wall, increased river velocities are expected in this area. Hydraulic modeling indicates that the placement of 18-inch rip rap in this area would not ensure long term channel stability. Therefore, ACB is required in this area. The remaining 345 feet of the riverbed in Cells 14 and 15 will be backfilled with a layer of filter material in low lying areas followed by a layer of 12-inch rip rap. Areas of the riverbed where bedrock was encountered at very shallow depths will be left with the bedrock exposed.

During the fourth week of March, the riverbank excavation was completed in Cell 14W and backfilling activities were initiated in Cells 14 and 15 riverbanks. The riverbanks in Cells 14 and 15 will be backfilled as follows: The first 185 feet of the lower riverbank requires ACB, therefore the riverbank will be restored with a layer of structural fill, geotextile and the ACB, with a top elevation between 974.2 and 975.5, (the required elevation depending on the existing topography). The riverbank above those elevations will be backfilled with common fill and a 6-inch layer of top soil. The remaining 345 feet of the riverbank will be backfilled with common fill or structural fill, a six inch layer filter material and an 18-inch layer of 12-inch riprap up to either elevation 973 or 974.2. Therefore, during the fourth week in March, the area of the riverbank where the ACB is to be installed was backfilled with a layer of structural fill and areas where rip rap is required was backfilled with common fill.

Also during the fourth week in March, the high pressure power washing of bedrock was supplemented with a vacuum truck to remove any residual sediment from the bedrock. During this sediment removal, a small amount of NAPL-impacted material was observed in Cell 14W. One truck load (approximately 10 cy) of the NAPL-impacted material was excavated and transported to the Building 68 stockpile management area. The bedrock fractures where the NAPL-impacted material was removed was encapsulated with a concrete mixture.

In addition, during the fourth week of March, the drilling and grouting activities for the 32 permanent tieback anchors for the pre-cast concrete panels for the reinforcement activities of the crib wall continued. The area between the concrete panels and the existing railroad tie crib wall was backfilled with 3/8" gravel. The concrete panels were monitored for movement during the backfilling activities to ensure there was no shifting of the concrete panel wall.

On March 26, 2004, due to the possible dam overtopping, all of the construction equipment was decontaminated and removed from the river channel. All the riverbanks in Cells 14 and 15 were covered with poly sheeting and secured in place with bin blocks to avoid possible erosion. Due to high river flows the stop logs were removed to elevation 976 and Cells 14 and 15 were flooded.

During the last week of March, Cells 14 and 15 remained flooded. The 54-inch pipe was relocated to the west side of the riverbed allowing access to the east side of the riverbed. Since Cells 14 and 15 were flooded the pipe was floated from one side of the river to the other. Erosion was observed in two sections of the partially backfilled riverbanks of Cell 14. With heavy rain forecasted for later in the week it was decided that additional material needed to be placed to reinforce the riverbanks and to protect the concrete retaining wall. Rip rap was installed along the west riverbank immediately downstream of the concrete retaining wall and along the base of the concrete retaining wall.

Also, drilling and grouting activities for the 32 permanent tieback anchors for the pre-cast concrete panels for the reinforcement activities of the crib wall were completed. Also, the remaining two anchors for the anchored sheetpile retaining wall were installed and grouted.

Other activities during the last week in March included adding cement to the roll off boxes holding the residual sediment material generated during the high pressure bedrock washing and vacuuming activities. The material was thickened with portland cement for transportation purposes. Due to the presence of NAPL in Cell 14 this material (approximately 30 cy) was transported to Building 68 stockpile management area. Also, activities associated with emptying the water treatment system modutanks were initiated. The sediment from the modutanks was removed and placed into roll off boxes.

During the month of March, the water treatment system treated water from Cells 14 and 15. Sampling of the water treatment system for parameters included in the NPDES exclusion permit was performed on March 23, 2004. Due to the presence of NAPL in Cell 14, the analytical parameters for the water treatment system sampling was expanded to include volatiles and semi-volatiles. Air monitoring for particulate matter (PM10 sampling) and surface water turbidity monitoring was performed on a daily basis. The monthly PCB air-monitoring event was performed on March 04, 2004. Surface water sampling for total suspended solids (TSS) and PCBs was performed on March 03, 2004 and March 17, 2004. Confirmatory PCB wipe samples were collected on decontaminated equipment. Four eight-point composite disposal characterization samples were collected on March 10, 2004 from the previously uncharacterized soils and sediments excavated from Cells 14 and 15 (currently stockpiled in Building 65 and Area 64C south). In addition, two eight point composite samples were collected from additional previously uncharacterized soils and sediments excavated from Cells 14 and 15 (currently stockpiles in Building 65) on March 24, 2004. One NAPL-impacted sediment sample was collected in Cell 14 on March 16, 2004. One composite off-site disposal characterization sample was collected from NAPL-impacted material (currently stockpiled in Building 68) on March 24, 2004.

Geotechnical samples were collected for Filter Material. The results of the geotechnical testing are not included in the monthly report but are contained in other submittals and are available upon request.

Verizon Telephone Company continued the utility relocation work on High Street to allow Phase 2 remediation activities to continue.

A portion of the Cell 14 and 15 pre-characterized non-TSCA materials from the Area 64D stockpile management area were transported to the Waste Management of New Hampshire-TREE, Rochester, NH from March 09 to March 11, 2004. (See Table 4 for a summary of material transported to the Waste Management of New Hampshire-TREE, Rochester, NH during the month of March 2004). The rest of the Cell 14 and 15 pre-characterized non-TSCA materials were transported on March 09 and March 10, 2004 to Seneca Meadows Landfill, Waterloo, N.Y. for landfilling. (See Table 5 for a summary of material transported to the Seneca Meadows Landfill, Waterloo, N.Y. during the month of March 2004).

Stockpile management area activities continued throughout the month of March. Daily inspections, operation, and maintenance activities were performed within Buildings 63, 65, Area 64 (the outside stockpile area) and Building 68. New hay bails and filter fabric were placed around catch basins in the stockpile management areas and access roads to prevent soils and sediment from entering the basins. Dust control procedures continued for access roads, parking areas, and material storage areas

Traffic control was conducted on Lyman Street, High Street and Elm Street during the month of March.

3. Sampling/test results received

The PCB sample results for the water treatment system sampling program were received for samples collected on March 23, 2004 and are summarized in Table 6; however the non-PCB sample results are not yet available. The results of the daily particulate air monitoring program are summarized in Table 7. Table 8 is a summary of daily turbidity monitoring results. Results for PCB and TSS samples and water column monitoring data collected on March 03, 2004 and March 17, 2004 are presented in Table 9. Table 10 contains PCB data associated with equipment confirmatory wipe samples. A summary of samples and PCB results collected for the air sampling conducted on February 11, 2004 and March 04, 2004 are provided in Table 11. Analytical results for post excavation characterization samples collected on March 10, 2004 and March 24, 2004 from the Cells 14 and 15, (Building 65 and Area 64C south soils and sediment stockpiles) are presented in Table 12. Table 13 presents data associated with NAPL-impacted sediment collected in Cell 14 on March 16, 2004. Post excavation characterization sample results for NAPL-impacted material (Building 68) collected on March 24, 2004 are summarized in Table 14.

4. Diagrams associated with the tasks performed

Figure 1 is a map of Phase 1, the Transition Phase and the beginning of Phase 2 and includes layout of all excavation cells, temporary dam, lot parcel identification numbers, water monitoring locations, air sampling locations, vibration monitoring locations, access road locations, fence line location, the water treatment system pad location, the effluent discharge location, and the utility trench location.

5. Reports received and prepared

Vibration monitoring activities were not performed during the month of March.

6. Photo documentation of activities performed

See attached photos.

7. Brief description of work to be performed in April 2004

- Continue utility relocation activities on the riverbanks from Elm Street Bridge to Dawes Avenue Bridge.
- If river flows permit, complete backfill activities in Cells 14 and 15.
- Complete the reinforcement activities of the crib wall and the parking lot on Parcel I8-10-5.
- Perform repairs of the twenty-four inch storm drain located on the parking lot of Parcel I8-23-6.
- Initiate fencing and tree clearing activities of the riverbanks from Station 527+60 (600 feet downstream of the Elm Street Bridge) to the Dawes Avenue Bridge.
- Perform the in-situ disposal characterization sampling of riverbanks within the remediation areas from Station 527+60 (600 feet downstream of the Elm Street Bridge) to the Dawes Avenue Bridge.
- Perform conditions and settlement surveys on structures located near the proposed remediation areas from Station 527+60 (600 feet downstream of the Elm Street Bridge) to the Dawes Avenue Bridge.
- Continue stockpile management activities at Buildings 63, 65, 68 and the Area 64 (outside contaminated material stockpile area).
- Continue transfer of Cell 14 and 15 non-TSCA materials from the stockpile management areas to approved off-site facilities.
- Continue daily air and turbidity monitoring.
- Continue PCB air sampling (once a month), water column sampling (twice a month), water treatment system sampling (once a month) and backfill material sampling (as needed).